

August 5, 1975

Chief, Technical Division, MTP-10

Chief, Regulations Division

Kadlec letter

The attached letter purports to interpret Sections 192.457(b) and 192.465(e) to preclude the use of a "tone change" electrical survey and, further, indicates our willingness to approve or disapproved methods of compliance. Action of this type touches on substantive rule making which could be challenged for lack of proper procedures, and is more than interpreting, or explaining, what the rules require.

Let's instead advise Mr. Kadlec precisely what is required, using the general term "electrical survey," and that choosing a method of compliance is up to the operator concerned.

If there is a problem with the "tone change" method, it should be handled by changing the rules to provide electrical survey standards.

L. M. Furrow, MTP-30

Attachment

January 7, 1976

Mr. Joseph P. Kadlec, P.E.
Kadlec Associates
P.O. Box 100
Bartlesville, OK 74003

Dear Mr. Kadlec:

This responds to your letters of June 3 and October 17, 1975, asking which methods of "electrical survey" may be used to comply with the requirements of 49 CFR 192.457(b) and 192.465(e). These safety standards require that certain buried or submerged pipelines be cathodically protected in areas of active corrosion and that the operator determine the areas of active corrosion by electrical survey. Section 192.457(c) defines "active corrosion" as "continuing corrosion which, unless controlled, could result in a condition that is detrimental to public safety."

Under these requirements, an operator must use an electrical survey method which identifies all areas of continuing corrosion along a pipeline with enough detail so that the operator can determine whether a condition detrimental to public safety could result. This public safety determination is necessarily based, among other relevant factors, on the effect of any continuing corrosion on a pipeline. Therefore, to meet the requirements, an electrical survey method must provide accurate measurements, by direct or indirect techniques, of corrosion rate, loss of metal relative to pipe wall thickness, potential differences, and current flow, which are factors necessary to evaluate the effect of corrosion. There are many electrical survey methods that an operator can use to meet the requirements but this Office does not preferentially recommend one method over another.

As you requested, we have added your name to our mailing list to receive copies of the Advisory Bulletin and copies of gas pipeline safety rule making documents.

We appreciate your interest in pipeline safety.

Sincerely,

Cesar DeLeon
Acting Director
Office of Pipeline
Safety Operations

KADLEC ASSOCIATES

October 17, 1975

Office of Pipeline Safety
Department of Transportation
Washington, D.C., 20590

Gentlemen:

On June 3, 1975, I sent you a letter inquiring which types of "electrical survey" methods are acceptable for determining areas of active corrosion on the external surfaces of buried pipelines.

I have not yet received a reply.

In particular, what types of electrical surveys are acceptable for screw joint and/or dresser coupled pipelines, wherein electrical continuity cannot be guaranteed. In a broader sense, what types of "electrical surveys" are acceptable or unacceptable in general for determining areas of "active corrosion" on buried pipeline? There are a number of methods which have been used by corrosion engineers through the years, ranging from a qualitative soil resistivity survey using a tone change in a pipeline locator [sic] as a minimum to a close interval direct pipe-to-soil potential survey, complete with side readings at each test point, close interval quantitative soil resistivities, and current flow measurements.

Somewhere in between these two extremes should fall a range of acceptable "Electrical survey" methods. Will you please define this range for me. Also, will you please put our firm on your mailing list.

Sincerely,

Joseph P. Kadlec, P. E.

KADLEC ASSOCIATES

June 3, 1975

Mr. Joseph C. Caldwell, Director
Office of Pipeline Safety
Department of Transportation
Washington, D.C. 20590

Dear Mr. Caldwell:

I appreciated your clarification of responsibility and jurisdiction of Part 192 for gas service lines between a customer's meter and his residence.

Another question has arisen among several gas companies with whom I deal regarding the determination of "areas of active corrosion by electrical survey." In particular, dresser coupled and screw joint lines, wherein complete electrical continuity cannot be guaranteed are under consideration.

What types of "electrical surveys" are acceptable, or unacceptable, for such pipelines?

For my own information, and in a broader sense, what types of "electrical surveys" are acceptable or unacceptable in general for determining areas of "active corrosion" on buried pipelines? There are a number of methods which have been used by corrosion engineers through the years, ranging from a qualitative soil resistivity survey using a tone change in a pipeline locator [sic] as a minimum to a close interval direct pipe-to-soil potential survey, complete with side readings at each test point and close interval quantitative soil resistivities.

Somewhere in between these two extremes should fall a range of acceptable "electrical survey" methods. Will you please define this range for me.

Sincerely,

Joseph P. Kadlec, P. E.